

## 中文摘要

題目：台灣酵母菌多樣性之研究：中草藥之葉表酵母菌

本計畫由四十二種中草藥植物葉表調查酵母菌之多樣性，收集與保存 202 株酵母菌，包括白色酵母菌 18 群 70 株，紅色酵母菌 10 群 48 株，黑色酵母菌 15 群 84 株。不同植物葉表分佈的酵母菌種類與多樣性不同，夏枯草最多，有九種；食、藥用韭菜最少，只有一、兩種。將 202 株菌的培養液以錠片擴散法分別測試對常見的四種格蘭氏陽性細菌與六種格蘭氏陰性細菌的抑制效果，共篩選出 23 株酵母菌有抑菌效果，鑑定出七屬八種。同種不同菌株拮抗細菌的種類不同，菌株間差異很大。抑菌效果最好的是 G14-2 白色酵母菌菌株，由台灣山豆根所分得，可抑制四種細菌的生長，包括 *Bacillus subtilis*、*Enterococcus faecalis*、*Aeromonas* sp. 與 *Staphylococcus aureus*，且抑制效果顯著。以 202 株酵母菌測試，結果只有一株菌 G9-2 能抑制 *Salmonella choleraesuis* 的生長，兩株菌 G5-4 與 G6-2 抑制 *Listeria monocytogens*，對 *Bacillus cereus* 與 *Pseudomonas aeruginosa* 則都沒有抑制能力。調查中發現台灣新紀錄種：*Bulleromyces albus*、*Candida edax*、*Debaryomyces castelli*、*Pichia carsonii*、*Rhodotorula acheniorum* 與 *Sporidiobolus pararoseus*。

關鍵詞：酵母菌、中草藥、多樣性

## 英文摘要

Title: Investigations of Yeast Diversity in Taiwan: Phylloplan Yeasts from Chinese Medicinal Herbs

Keywords : yeast, Chinese medicinal herbs, biodiversity

This project investigated phylloplan yeasts from 42 Chinese medicinal herbs. We collected 202 yeast isolates including 70 white yeast isolates of 18 morphospecies, 48 red yeast isolates of 10 morphospecies, and 84 black yeast isolates of 15 morphospecies. Different plant inhabited different yeast flora. There were 9 yeast species represented on the leaves of *Prunella vulgaris*; whereas only 1/2 species on leek leaves, *Allium tuberosum*. Disk diffusion method was used to test the inhibition ability of 202 yeast isolates to 10 clinical bacteria, 4 Gram positive and 6 Gram negative bacteria. Twenty-three isolates were selected and 11 of them were identified to 7 genera and 8 species. A white yeast isolate 14-2 demonstrated significant inhibition ability to *Bacillus subtilis*, *Enterococcus faecalis*, *Aeromonas* sp. and *Staphylococcus aureus*. Among 10 tested bacteria, *Bacillus cereus* and *Pseudomonas aeruginosa* are not inhibited by yeasts, *Salmonella choleraesui* was sensitive to isolate G9-2 only, and *Listeria monocytogens* was sensitive to isolates G5-4 and G6-2. *Bulleromyces albus*, *Candida edax*, *Debaryomyces castelli*, *Pichia carsonii*, *Rhodotorula acheniorum* and *Sporidiobolus pararoseus*。

are recorded as new to the fungal flora of Taiwan.